

# VU Research Portal

## Transborder European Networking: Shifts in Corporate Strategy 1996

van Geenhuizen, M.; van der Knaap, G.A.; Nijkamp, P.

### ***published in***

European Planning Studies  
1996

### ***DOI (link to publisher)***

[10.1080/09654319608720373](https://doi.org/10.1080/09654319608720373)

### ***document version***

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### ***citation for published version (APA)***

van Geenhuizen, M., van der Knaap, G. A., & Nijkamp, P. (1996). Transborder European Networking: Shifts in Corporate Strategy 1996. *European Planning Studies*, 4(6), 671-682.  
<https://doi.org/10.1080/09654319608720373>

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

## Trans-border European Networking: Shifts in Corporate Strategy?

---

MARINA VAN GEENHUIZEN, BERT VAN DER KNAAP AND PETER NIJKAMP

*[Paper first received, September 1994; in final form, January 1996]*

**ABSTRACT** *The disappearance of man-made borders and the need for increased international cooperation seem to prelude a removal of unnecessary obstacles between actors in different countries. This article is concerned with the relationship between political borders, economic development of border regions and networking of companies located there. It presents a 'state of the art' of research on border region development and trans-border networking by companies. Based upon this research, the article concludes with a discussion on conditions that influence the emergence of new corporate networking in border regions, including effective policy action.*

### 1. Introduction

In recent years Europe has witnessed an unprecedented disappearance of many man-made borders, exemplified by the opening up of the east European power bloc. At the same time, signs of international cooperation in the EU and the European Free Trade Association (EFTA) seem to prelude a worldwide gradual removal of unnecessary obstacles between the countries concerned. Whether these developments lead to an open or borderless society for the economic benefit of all actors remains, however, to be seen.

Since the late 1980s, economic development of border regions has received renewed attention, particularly in relation to the new role of regions in an enlarged Europe (cf. Cappelin & Batey, 1993; Hardy *et al.*, 1995; Kuklinski, 1995). Some researchers emphasize the strengthening of established economic core areas with a reinforcing of the peripheral position of other regions (cf. Kunzmann & Wegener, 1991). Others suggest a regional convergence and even inversion, the latter indicating a shift of economic power from traditional economic core areas to hinterland or peripheral areas (Suarez-Villa & Cuadrado-Roura, 1993). This type of analysis has usually a focus on regional development within the framework of entire nations.

The focus of the study here will be on lower spatial scale levels. Accordingly, the term 'trans-border networking' refers to networking at relatively short distances between actors in border regions of different countries. Trans-border cooperation in European border regions is stimulated by the EC in order to solve common border-related problems and take advantage of the potentials of these regions (e.g. joint planning, production). By the end of the

Marina van Geenhuizen, School of Systems Engineering, Policy Analysis and Management at Delft University of Technology, and Department of Regional Economics, Free University, Amsterdam. Bert van der Knaap, Economic Geography Institute, Faculty of Economics, Erasmus University, Rotterdam. Peter Nijkamp, Department of Regional Economics, Faculty of Economics and Econometrics, Free University, Amsterdam.

1980s this led to the establishment of about 40 'Euroregions', located along the internal borders of the EU and indicating some form of trans-border cooperation between public organizations.

Vanishing political borders do not automatically imply more openness. Mankind seems to be keen on inventing new barriers to precluding the free movement of people, goods and information. Self-interest or group interest is apparently a strong driving force which is often at odds with the benefits of a borderless society. In addition, although political borders disappear, their heritage in terms of cultural and institutional differences may remain for a long time (cf. Rumley & Minghi, 1991; Molle, 1990). Furthermore, Europe may still remain fragmented to a certain degree owing to EC policies such as for industry and trade.

Following Nijkamp *et al.* (1990) a barrier refers to all obstacles that cause discontinuities in interaction in time and space. Barriers keep people and goods apart, and prevent communication and knowledge transfer (cf. Geenhuizen, 1994; Nijkamp, 1994; Suarez-Villa *et al.*, 1992). The related term of a border has more of a geo-political meaning: it is the line separating two political or geographical areas, especially countries. It is now a fascinating research question as to whether regional development can benefit from disappearing borders by new networking between companies located in border areas. Within this framework, this paper aims to provide a 'state of the art' view of theoretical and empirical studies.

The article will open with a conceptual discussion on networking and barriers to networking (Section 2). The attention will then shift to theoretical approaches to economic development of border regions (Section 3). Results of empirical research on border region development using a micro (company) perspective will be considered in Section 4. This analysis is based upon a blend of various applied research on synergetic behaviour of European companies. Particular attention will be paid to barriers to trans-border networking identified in this research (Section 5). The article will conclude with a reflection on conditions under which companies in border regions start new networking, including effective policy action.

## 2. Corporate Networking

Since the early 1980s networks have been recognized as an important organizing principle for interaction between companies. This thinking stems from a renewed interest in the work of Coase (1937) on firms and transaction costs, new ideas on intermediate forms between firms and markets (cf. Richardson, 1972; Williamson, 1985), and the recognition of a growing static and dynamic uncertainty in corporate reality (Camagni, 1991). The relevance of networks as a third type of organization besides market and hierarchy types is now widely accepted. The basic assumption of network relationships is that one actor is dependent on resources controlled by other actors, and that benefits can be gained by the pooling of resources (cf. Powell, 1990).

Industrial networks can be described as sets of connected exchange relations among actors involved in industrial activities. By focusing on corporate networks seven major elements can be distinguished (Håkansson, 1988; Håkansson & Johanson, 1993; Kamann, 1993):

- actors (companies, their suppliers, clients, competitors, etc.);
- resources (human, physical, financial);
- activities (transformation, transaction, etc.);
- interaction (relationships between actors);
- power and dependency (the latter being the outcome of exerted power);
- knowledge (about actors, resources, relationships, etc.);
- facility or channel (the medium that facilitates interaction, such as share-holding, roads).

Networking has been a popular strategy particularly since the late 1970s, when technological as well as market complexity and uncertainty increased. In general, relationships are formed, maintained and broken in an intentional way based on their perceived benefit within a particular strategic context (cf. Cook, 1982). Benefits may be connected with cost reduction, access to technological knowledge, increase of efficiency, supply of scarce resources (e.g. labour, capital), etc. Benefits gained by networking should in any case exceed the costs of access, establishment and maintenance of the networks.

A purely economic approach to network relationships has recently been challenged by the 'embeddedness' approach. In the latter, two particular social characteristics of networks are emphasized (Grabher, 1993). First, embeddedness refers to the fact that economic action and outcomes are affected by the actors' dyadic relations and by the structure of the overall network of relations. This means that decisions for participation in networks are not taken in isolation, but reflect a certain tuning in to other relationships. Secondly, embeddedness refers to the historical dimension of networking. Transaction or exchange relations do not start from scratch each day but from sets of previously attained common understandings between the interacting partners. These observations indicate that companies will not (re)structure their network relationships immediately or in an isolated manner, when reacting to changes in their environment.

Recently, much attention has been paid to various barriers in networking. Lack of access to networks or missing connections between networks hamper the efficiency and competitiveness of actors and the regional economies involved (cf. Nijkamp, 1994). Within this framework barriers to networking have been classified in different ways. To date, at least seven dimensions can be identified (Geenhuizen, 1994; Giaoutzi & Kamann, 1993; Kamann, 1993; Nijkamp *et al.*, 1990; Ratti, 1993, 1994; Suarez-Villa *et al.*, 1992):

- the field where barriers occur, i.e. physical (infrastructural), economic, technical, socio-cultural;
- the origin of barriers, i.e. natural and man-made, intended and unintended, primary and derived barriers;
- the position of barriers in relation to the network, i.e. internal (endogenous) and external (exogenous), node barriers and link barriers;
- the organizational setting of barriers, e.g. related to individual actors or organizations, to symmetric or asymmetric relationships;
- the spatial scale, ranging from micro to macro levels;
- the time dimension of barriers, i.e. temporal and permanent, regular and irregular patterns;
- the permeability and intensity of barriers, e.g. absolute closure, filtering, etc.

A major distinction needs to be made between intended and unintended barriers. The latter type is inherent in the nature of networks or a consequence of other barriers. One specific barrier inherent in the nature of networks is inertia (Håkansson, 1988), i.e. in once established networks there is a certain reluctance for including new (unknown) actors. On the other hand, intended barriers are imposed for protection against access to networks and against transfer of goods (information). Important examples are found in property and ownership regimes, such as patent protection.

It is increasingly realized that political borders as intended barriers may vanish whereas socio-cultural barriers stemming from these borders last for a long time. The next section will discuss a number of theoretical views on border region development, particularly barrier effects of political.

### 3. Border Region Development: Theoretical Perspectives

There are essentially two different views on border regions (Giaoutzi & Stratigea, 1995; Ratti, 1993). The first view is that of the 'border area', defined as the territory adjacent to a fixed frontier line in which the socio-economic impacts of the border are strongly felt (Hansen, 1977). The second view is the one of the 'frontier limit', in which the border is less seen as a line of separation but as an external limit (demarcation line) which is potentially mobile.

The above views can be used as guiding principles for the classification of various approaches to border region development. Accordingly, the 'border area' view encompasses the following four approaches (Ratti, 1993, 1994):

- (1) *The functional activity approach.* The focus here is on identifying the functional impact of a frontier on the development of adjacent regions, such as flow interruption and discriminating effects.
- (2) *The core-periphery approach.* Border areas are considered here as institutional as well as economic outskirts. The interpretation of border region development is led by a dualistic thinking in terms of a unique centre and outer zones. This is, however, a limited perspective in view of the newly emerged regional and global interrelationships.
- (3) *The regional system approach.* Here the emphasis is on the role of the border in regional restructuring processes. The approach enables the analysis of the evolution of border regions, such as from a peripheral area to an area of contact and economic growth.
- (4) *The strategic planning approach.* This approach takes into account that the strategic behaviour of economic (planning) actors is influenced by their subjective perception of borders as fixed lines of separation.

The second view on borders—as limiting but not necessarily fixed frontiers—can serve as a heading for various other approaches to border region development in the following way (Ratti, 1993, 1994):

- (1) *The spatial micro-economic approach.* In this approach (represented by the two classical authors Loesch and Christaller) it is recognized that barrier influences cause spatial effects of distortion and non-integration. Political and economic borders have an interrupting effect, particularly on the network of market areas.
- (2) *The international trade theory.* The focus here is on the impact of economic integration (trade liberalization) on regional disparity.
- (3) *The spatial behavioural approach (geography of perception).* The analysis using this approach focuses on the role of the border in the perception of actors of their spatial environment (Houtum, 1994). Mental maps have a key role here.
- (4) *Innovation diffusion theory.* The focus here is on spatial diffusion (or filtering down) of technological innovation. The limiting impact of frontiers is associated with the distance to economic core areas (neighbourhood criterion), and the position in the urban hierarchy.

In the aforementioned 'border area' view an interesting typology of impacts of political borders on adjacent regions has been developed. This typology provides a useful framework for the analysis of trans-border cooperation. Three types of impact have been distinguished (Ratti, 1993), while a fourth type can essentially be added (Giaoutzi & Kamann, 1993):

- (1) *Border-barrier effects.* (Almost) closed barriers stop or strongly penalize interaction. In this case, border regions are handicapped in their development by the peripheral location in the national system and the principle of separation.
- (2) *Filtering effects.* Partially permeable barriers distort the intensity or direction of interaction, or cause a selection of interaction. The dominating principle is still that of separation.

**Table 1.** Recent examples of research on trans-border networking of companies

Study	Border area		Scale		Networking considered
	Inner	Outer	Border region	Nation	
Dagevos <i>et al.</i> , 1992	The Netherlands/ Belgium	---	X	---	Various
Corvers <i>et al.</i> , 1994	The Netherlands/ Belgium, Germany	---	X	---	Knowledge
Ratti, 1993	---	Switzerland/ Italy	X	X	Various specific agreements
Giaoutzi & Kamann, 1993	---	Greece/not defined	---	X	Various
Steiner & Sturn, 1993	---	Austria/Hungary/ former Yugoslavia etc.	X	X	Various
Geenhuizen <i>et al.</i> , 1994	The Netherlands/ Belgium/Germany	---	X	X	Various specific agreements
Hamm & Kampmann, 1995	The Netherlands/ Germany	---	X	X	Services use

R = Border region; N = Nation.

- (3) *Open border effects.* Partially open borders enable (advance) various contact between political-institutional and socio-economic subsystems. The function of contact is dominant here. Accordingly, the development of border areas is determined by the potential advantages of the combination of two border areas.
- (4) *Conditioning effects.* Borders cause different 'ways of doing things', for example, in a legal, political and socio-cultural sense. Such differences may hamper the establishment of contact, despite open borders.

It stands to reason that the above effects have a different influence on companies looking for interesting partners across the border. To date, only a limited number of empirical studies on trans-border networking have been carried out. The next section will discuss some important results of these studies.

#### 4. Trans-border Networking: Empirical Research

An inventory of research on trans-border corporate networking in the early 1990s (Table 1) indicates a number of differences in methodology and focus. The most important are the following:

- Diverse definitions of border regions, e.g. border areas as public authority regions and as functional economic spaces.
- Different spatial scale of analysis, e.g. small regions along both sides of the border, entire countries and combinations of both.
- Diverse types of border regions, e.g. inner border areas in the EU and areas bordering other tradebloes; border areas in typical transit zones (Swiss and Austrian Alps, Slovenia) and in remote areas.
- Type of networking taken into consideration, i.e. focused on specific resources (knowledge) and on a broad range of production activities (services), casual networking and formal agreements.

There is one comprehensive study of trans-border networking among companies, namely in the central Benelux region (Dagevos *et al.*, 1992). This study has analyzed networking and barriers to this networking at both sides of the Dutch-Belgian border. A further study has been carried out among companies in Austria (Styria) in view of cooperation in Hungary, Slovenia and Croatia (Steiner & Sturn, 1993). The methodology of these studies is similar regarding the focus on companies already engaged in trans-border networking. However, the lists of predefined barriers and the type of ranking used in the studies compare only in broad lines (Table 2). An interpretation of the results therefore, needs to be cautious.

The character of the border regions involved is widely different. In 1944, an agreement was established between Belgium, Luxemburg and the Netherlands in order to remove the system of import taxes, leading to the Benelux Union Treaty in 1958 (Houtum, 1994). Accordingly, there has been an almost complete liberalization of cross-border traffic and trade in central Benelux for years. Austria, however, has been separated from Hungary and Northern Yugoslavia with different political and economic systems until the late 1980s, although the borders have never been entirely closed.

Not surprisingly, the results indicate a clear difference in the nature of the most significant obstacles, i.e. in central Benelux law (social and fiscal) and in south-east Austria overall uncertainty (political instability and contract risks) (Table 2). A remarkable similarity between the two border regions is the importance of information shortage, particularly on potential partners for cooperation. This points to a role of political borders in mental maps, irrespective of an actual separation function of these borders. A further remarkable result is the importance of the costs of crossing the border in central Benelux. This importance may be connected with actual shortcomings in the traffic infrastructure but may also have a broader meaning. Trans-border cooperation is not only a matter of transportation costs but also of rearranging relationships and transaction costs. The perceived sum of these costs may be rather high compared with the overall benefits of trans-border cooperation.

An interesting issue is the relevance of trans-border networking in corporate reality. Results on this issue are available in the previously mentioned study on central Benelux. The importance of trans-border networking is measured here as the share of trans-border networking in total networking per company in a particular field, such as R&D and manufacturing of components (Table 3).

It appears that the most important relationships are concerned with working and manufacturing of components, and transport and distribution. Quality control (Turnhout) and design (central Brabant) are also relatively important. An interesting result is the rather low level of trans-border networking in total networking in the various fields, i.e. around 8% (Turnhout) and 6% (central Brabant). Figures from a different study (Euregio Rhein Maas Nord) indicate an even lower level of importance of trans-border networking (Hamm & Kampmann, 1995). It needs, however, to be emphasized that a lack of a 'standard' prevents an adequate interpretation of these figures.

A further Dutch research on trans-border networking (Euregio Maas-Rhine) has a particular focus on knowledge contacts (Corvers *et al.*, 1994). This study also indicates a small trans-border orientation. There is an overall national orientation in knowledge networks and when cooperation is abroad, the distances involved are much larger than in border areas. In fact, the relatively open Dutch-German and Dutch-Belgian borders have not led to a blooming trans-border networking. Apart from potential effects of mental maps, this situation indicates the absence of benefits from trans-border cooperation in these regions.

We conclude this overall picture of empirical research with a study of the establishment of organizational relationships abroad, i.e. joint ventures and acquisition (takeovers). In this analysis networking is considered within the strategic context of the company in view of

**Table 2.** Major barriers in actual trans-border networking in central Benelux<sup>a</sup> and south-east Austria<sup>b</sup> (rank order)

Ranking from country		Barriers/obstacles encountered
The Netherlands	Belgium	
1-3	2	Social laws (labour)
1-3	3	Laws on taxes/levies
1-3	6	Cost of crossing border
4	5	Information on subsidization
5-6	1	Information on potential partners
5-6	---	Traffic infrastructure
7-8	7	Legal system
7-8	4	Permits
Austria		
1-2		Political instability
1-2		Contract risks
3-4		Information on potential partners
3-4		Low quality of products
5		Language barriers
6		Contract complications

<sup>a</sup>The Netherlands (Tilburg) and Belgium (Turnhout): firms with already existing cooperation were asked for a ranking of predefined barriers.

<sup>b</sup>Austria (Styria): firms with already existing cooperation were asked for a mutual ranking of predefined barriers.

Source: Adapted from Dagevos *et al.* (1992); Steiner and Sturn (1993).

product-market shifts and technological innovation (Geenhuizen, 1993; Geenhuizen *et al.*, 1994). The results are based on case study evidence among large and medium-sized textile manufacturing companies, located in Dutch border regions (in Table 4 denoted T1-3). Based on the tentative results of this study the following conclusions can be drawn:

- Trans-national (trans-border) networking is not novel but was a common strategy already in the 1960s.

**Table 3.** Importance of trans-border networking in central Benelux<sup>a</sup>

Field of networking	Companies located in central Brabant		Companies located in Turnhout	
	Rank	(%)	Rank	(%)
Components working	1	8.3	2	9.1
Transport, distribution	2	7.2	4	8.7
Design, etc.	3	6.8	---	---
Manufacturing of components	4	6.5	3	8.8
R&D	5	5.8	7	6.6
Quality control	6	4.5	1	10.5
Maintenance and repair	7	3.4	6	7.5
Recruitment of personnel	---	---	5	7.8

<sup>a</sup>Rank order based on percentage share of trans-border networking in all networking in a particular field.

Source: Adapted from Dagevos *et al.* (1992).



**Table 4.** Networking in the Dutch textile industry (case studies)

Year	Country	Strategic context	TB
T1			
1963 (JV)	Spain	Market share increase	----
1973 (JV)	Japan	Distribution channels	----
1974, 1976	Germany	Market share increase	X
1985, 1990	UK	Market share increase	----
1990	Belgium	Market share increase	X
T2			
1963, 1964	Belgium	Production capacity increase	X
1975 (JV)	Belgium	New technology and production capacity increase	X
T3			
1960 (JV)	US and France	Partly new technology	----
1970 (JV)	Greece	Various motives	----
1970 (JV)	US	New product	----
1973 (JV)	US	Market share increase	----
1979 (JV)	US	Market share increase, new technology	----
1985, 1986	US	Market share increase	----
1988	UK	Market share increase	----
1988, 1989(2x)	US	New product	----
1989 (JV)	US	New technology	----
1989 (JV)	France	Market share increase	----

JV = joint venture.

TB = Trans-border.

T1-3 = Case studies.

Source: Adapted from Geenhuizen *et al.* (1994).

- Companies aimed at new products and technology tend to develop a broad spatial network orientation, beyond the scale of adjacent border areas. This is based on a fairly small chance to find highly innovative companies at a short distance.
- Companies aimed at market share increase and increase of production capacity tend to focus on adjacent border areas. With such strategies, there is a fairly good chance to find interesting partners at a short distance, particularly when similarity in sectoral specialization of the regional economies is at hand.

The above different strategic contexts for networking can be illustrated as follows. In the Dutch textile industry, networking aimed at increasing production capacity and avoiding Dutch labour shortage had a strong focus on Belgium in the 1960s (Geenhuizen, 1993). This is exemplified by case study T2 (Table 4). On the other hand, companies that improved their innovativeness by new products captured the technology and the related market outlets partly abroad at greater distances. Thus, T3 undertook a stepwise reorientation from traditional textiles to synthetic products and advanced materials. The technology and market outlets necessary for this innovative reorientation were partially captured in the US. In this strategy, trans-border cooperation in adjacent regions was not relevant.

Based upon the above empirical study it can be concluded that the analysis of trans-border networking needs a differentiated approach in view of corporate strategies and specific networking needs on each side of the border.

## 5. Focus on Obstacles

Obstacles in trans-border cooperation range from the operational level of crossing borders between countries to much more complex forms in the establishing of cooperation networks (Table 5). The major classes of such barriers can be illustrated as follows:

- (1) *Transport*. Road and rail transport networks are often badly tuned into trans-border activities. This is true both for the physical infrastructure (missing and deficient links) and for the service-level of public transport (Dagevos *et al.*, 1992; Nijkamp, 1994). Bottlenecks in traffic infrastructure are especially common in regions bordering the former 'iron curtain', where rail and road systems have usually been constructed with a focus on the national capital cities and economic gravity centres within the power bloc (Eskelinen, 1995). In addition, in north-eastern Europe the way traffic is handled at particular border crossings can cause delays or even damage (Segercrantz, 1995).
- (2) *Socio-cultural barriers*. Language is the most significant problem here, including spoken, written and computer languages, as well as the vocabulary used in communication. The latter can follow from actors being at different stages in technological development, and from differences in their organizational culture (Kamann, 1994; Williams & Gibson, 1990). Furthermore, distorted perceptions may have arisen regarding the way things are done on the 'other' side of the border.
- (3) *Economic-institutional barriers*. Significant problems of this type are observed between western and central-eastern Europe, such as property regimes, and principles of economic and monetary organization. Less serious barriers of this type are observed between countries like Belgium, Germany and the Netherlands, caused by laws on environmental protection. These laws seem to be more rigid (or their enforcement more rigorous) in the Netherlands compared with Belgium and Germany (Corvers *et al.*, 1994).
- (4) *Technology*. Technical problems often arise between eastern and western European border regions (Segercrantz, 1995), due to different standards in vehicles and in transport, and different standards and specifications in the manufacturing industry.

The wide variety of these obstacles cause different impacts on potentials for trans-border activities across the EU, and thus leads to different policy needs for removing these obstacles.

## 6. Conclusion

This article concludes with some considerations on the conditions influencing the role of corporate networking in the economic development of border regions. The preceding findings indicate that trans-border networking potentially improves the competitive position of firms. Three opposing corporate strategies in border regions can be distinguished:

- (a) No change in corporate networking.
- (b) New corporate networking on scales exceeding the adjacent border regions, leading to benefits for only one part of border areas.
- (c) New corporate networking on trans-border scales, leading to benefits on both sides of the border.

Various conditions may promote option (a). The first is the absence of an economic reason for changes in networking. The historical embeddedness of companies is also important here (Grabher, 1993). Historically developed networks (perhaps with a national orientation) cannot be changed at once, even when there are economic reasons. A further condition leading to option (a) is the impact of barriers. It may be the case that there are true economic reasons for new networking across the border, but barriers—such as those in Section 5—prevent this.

**Table 5.** Obstacles encountered in European trans-border networking

Obstacles	
Transport	Natural obstacle Congestion at border crossings (overload/low service level) Lack of safety (criminality) Missing/deficient links in networks <sup>a</sup>
Socio-cultural	Language and vocabulary <sup>a</sup> Educational and income level Small skill to identify partners (mental map) Ideology
Economic-institutional	Economic system (principles) <sup>a</sup> Monetary system (stability and convertibility of currency) <sup>a</sup> Legal and fiscal system <sup>a</sup> Property and ownership regimes <sup>a</sup> Trade borders and tariffs <sup>a</sup> Price level <sup>a</sup> High cost of network participation
Technology	Level of communication technology and logistic management <sup>a</sup> Professional level of personnel <sup>a</sup> Infrastructure and navigation standards (communication) <sup>a</sup> Standards and specifications in manufacturing
Political	Instability of political systems <sup>a</sup>

<sup>a</sup>Particularly important between western and eastern Europe.

Source: Various empirical research cited in the text.

The impact of some of these may be mitigated by a targeted policy (to be discussed further in this section).

Option (b) seems plausible when economic reasons for new networking are absent in border areas but present in regions at a further distance from the border. Proximity alone seems no reason for networking. Why would a firm start networking across the border when interesting partners (resources, information) are not located there?

Option (c) is realistic both when there are economic reasons for networking directly across the border and when this networking is not hampered by barriers. In this case, border region development takes full advantage of trans-border networking.

We can conclude that the most significant factors causing a spatial differentiation in the previously mentioned conditions are:

- the location of border regions, i.e. inner border regions (within the EU) and border regions with other trade blocs;
- the type of former borders and (former) barrier impacts, e.g. frontier effects or filtering effects;
- the nature of the regional economies on either side of the border, in terms of sectoral structure, innovation potential service level and function in transport (transit zones, remote regions, etc.).

The overall finding of this study is that regional development of border areas and the role of corporate networking is a very differentiated matter. There is not simply a shift in corporate strategy when political borders disappear. Instead, there is a highly differentiated response.

In order to achieve a better insight into the major determinants of this differentiation, further cross-national comparative research is preferably based upon a standardized research outline and methodology, using similar concepts and operational definitions, etc. This is also

important, in view of the development of appropriate policies aimed at the removal of barriers to trans-border cooperation.

When considering the removal of such obstacles, it needs to be emphasized that the influence of regional (planning) policy is fairly limited regarding the nature of most problems encountered, particularly those in the political and economic-institutional field. In the fields where a policy is realistic, this policy needs to be multifaceted, including improvement of the traffic infrastructure, social learning in borderland communities and various measures to facilitate networking. The removing of socio-cultural barriers requires especially a variety of policies, both general and targeted ones. A general policy makes use of social learning in local communities through which openness and solidarity (based upon a common history and cultural identity) may be reinforced: cultural exchange, jointly organized projects, etc. are common tools here. A targeted policy may focus on improving mental maps in local business by providing information on opportunities for networking abroad. This includes the supply of inventories on business characteristics on the other side of the border, and more actively, the organization of events (fairs, exhibitions, informal business meetings, excursions) where actors can meet. One particular tool in a multifaceted policy is the establishment of business parks close to borders. The attraction of companies to such parks may be stimulated by tax exemption and investment incentives. However, it needs to be realized that such initiatives have only the impact of a bridge between border region economies when economically interesting partners for networking are attracted.

It can be concluded that a regional (planning) policy aimed at removing barriers to trans-border cooperation is only effective when it is realistic in terms of removable barriers and uses a multifaceted approach, and when it has a focus on regions where companies are interested in trans-border cooperation for economic reasons.

## References

- AMIN, A. (1993) The globalization of the economy. An erosion of regional networks? in G. GRABHER (Ed.) *The Embedded Firm. On the Socioeconomics of Industrial Networks*, pp. 278-295. London: Routledge.
- CAMAGNI, R. (1991) Local 'milieu', uncertainty and innovation networks, in R. CAMAGNI (Ed.) *Innovation Networks. Spatial Perspectives*, pp. 121-144. London: Belhaven Press.
- CAPPELIN, R. and BATEY, P. W. J. (Eds) (1993) *Regional Networks, Border Regions and European Integration*. London: Pion.
- COASE, R. H. (1937) The nature of the firm, *Economica*, New Series IV, pp. 386-405.
- COOK, K. (1982) Network structures from exchange perspective, in P. MARSDEN and N. LIN (Eds) *Social Structure and Network Analysis*, pp. 177-199. New York: Free Press.
- CORVERS, F., DANKBAAR, B. and HASSINK, R. (1994) *Nieuwe kansen voor bedrijven in grensregio's. (New chances, for companies in border regions)*. Maastricht: MERIT/'s-Gravenhage: COB/SER.
- DAGEVOS, J. ET AL. (1992) *Grensoverschrijdend Perspectief. (Transborder Perspectives)*. Tilburg: Economisch Instituut.
- ESKELINEN, H. (1995) *Cross-border Cooperation and Transport Networks in the Transition of a Backwoods Periphery: The Case of Russian Karelia*. Paper for the Nectar Cluster 4 Workshop, Delft NL. 20-21 January 1995.
- GEENHUIZEN, M. VAN (1993) *A Longitudinal Analysis of the Growth of Firms*. Rotterdam: Erasmus University (PhD thesis).
- GEENHUIZEN, M. VAN (1994) Barriers to technology transfer, in J. CUADRADO, P. NIJKAMP and P. SALVA (Eds) *Moving Frontiers: Economic Restructuring, Regional Development and Emerging Networks*, pp. 247-276. Aldershot: Avebury.
- GEENHUIZEN, M. VAN and KNAAP, B. VAN DER (1994) Dutch textile industry in a global economy, *Regional Studies*, 28, pp. 695-711.
- GEENHUIZEN, M. VAN, KNAAP, B. VAN DER and NIJKAMP, P. (1994) *Transborder European Networking. Corporate Strategies between Threats and Opportunities*. Amsterdam: Tinbergen Institute.

- GIAOUTZI, M. and KAMANN, D.J. (1993) The role of corporate structures in border regions, in R. RATTI and S. REICHMAN (Eds) *Theory and Practice of Transborder Cooperation*, pp. 269–301. Basel: Helbing and Lichtenhahn.
- GIAOUTZI, M. and STRATIGEA, A. (1995) Barriers in network performance in border areas, in H. COCCOSSIS and P. NIJKAMP (Eds) *Overcoming Isolation*, pp. 53–73. Berlin: Springer.
- GRABHER, G. (1993) Rediscovering the social in the economics of interfirm relations, in G. GRABHER (Ed) *The Embedded Firm. On the Socioeconomics of Industrial Networks*, pp. 1–31. London: Routledge.
- HAKANSSON, H. (1988) *Industrial Technological Development. A Network Approach*. London: Croom Helm.
- HAKANSSON, H. and JOHANSON, J. (1993) The network as a governance structure: interfirm cooperation beyond markets and hierarchies, in G. GRABHER (Ed) *The Embedded Firm. On the Socioeconomics of Industrial Networks*, pp. 35–51. London: Routledge.
- HAMM, R. and KAMPMANN, R. (1995) Probleme kleinräumlicher europäischer Integration, 'Euregio rhein maas nord', *RWI Mitteilungen*, 36, pp. 163–188.
- HANDY, S., HART, M., ALBRECHTS, L. and KATOS, A. (1995) *An Enlarged Europe. Regions in Competition?* London: Jessica Kingsley Publishers.
- HANSEN, N. (1977) Border regions: a critique of spatial theory and a European case study, *Annals of Regional Science*, 11, pp. 1–14.
- HOUTUM, H. VAN (1994) De Benelux, een grenzeloze Economische Unie? in F. BOEKEMA, H. VAN HOUTUM and K. VERAGHTERT (Eds) *Benelux, Quo Vadis?*, pp. 23–62. Groningen: Wolters-Noordhoff.
- KAMANN, D.J. (1993) Bottlenecks, barriers and networks of actors, in: R. RATTI and S. REICHMAN (Eds) *Theory and Practice of Transborder Cooperation*, pp. 65–101. Basel: Helbing and Lichtenhahn.
- KAMANN, D.J. (1994) Spatial barriers and differentiation of culture in Europe, in P. NIJKAMP (Ed.) *New Borders and Old Barriers in Spatial Development*, pp. 35–63. Aldershot: Avebury.
- KUKLINSKI, A. (Ed.) (1995) *Baltic Europe in the Perspective of Global Change*. Warsaw: European Institute for Regional and Local Development.
- KUNZMANN, K. R. and WEGENER, M. (1991) *The pattern of urbanization in western Europe 1960–1990*. Dortmund: IRPUD.
- MOLLE, W. (1990) *The Economics of European Integration*. Aldershot: Dartmouth.
- NIJKAMP, P., RIETVELD, P. and SALOMON, I. (1990) Barriers in spatial interactions and communications. A conceptual exploration, *The Annals of Regional Science*, 24, pp. 237–252.
- NIJKAMP, P. (Ed.) (1994) *New Borders and Old Barriers in Spatial Development*. Aldershot: Avebury.
- POWELL, W. W. (1990) Neither market nor hierarchy: network forms of organization, *Research in Organizational Behavior*, 12, pp. 295–336.
- RATTI, R. (1993) Spatial and economic effects of frontiers, in: R. RATTI and S. REICHMAN (Eds) (1993) *Theory and Practice of Transborder Cooperation*, pp. 23–53. Basel: Helbing and Lichtenhahn.
- RATTI, R. (1994) Spatial effects of borders: an overview of traditional and new approaches to border region development, in P. NIJKAMP (Ed.) *Europe on the Move*, pp. 115–137. Aldershot: Avebury.
- RICHARDSON, G. B. (1972) The organization of industry, *Economic Journal*, 82, pp. 883–896.
- RUMLEY, D. and MINGHI, J. (1991) *The Geography of Border Landscapes*. London: Routledge.
- SEGERCRANTZ, W. (1995) *The Baltic Case: Helsinki—St. Petersburg and the Eastern Baltic*. Paper for the Nectar Cluster 4 Workshop, Delft 20–21 January 1995.
- STEINER, M. and STURN, D. (1993) From coexistence to cooperation: the changing character of Austria's southeastern border, in R. RATTI and S. REICHMAN (Eds) (1993) *Theory and Practice of Transborder Cooperation*, pp. 347–376. Basel: Helbing and Lichtenhahn.
- SUAREZ-VILLA, L. and CUADRADO-ROURA, J. R. (1993) Regional Economic Integration and the Evolution of Disparities. *Papers in Regional Science: The Journal of The RSAI*, 72, pp. 369–387.
- SUAREZ-VILLA, L., GIAOUTZI, M. and STRATIGEA, A. (1992) Territorial and border barriers in information and communication networks: a conceptual exploration, in *Tijdschrift voor Economische en Sociale Geografie*, 83, pp. 93–119.
- WILLIAMS, F. and GIBSON, D. V. (Eds) (1990) *Technology Transfer. A Communication Perspective*. Newbury Park: Sage.
- WILLIAMSON, O. E. (1985) *The Economic Institutions of Capitalism*. New York: Free Press.